

# Build and Share Interactive Content

Maple 2024 provides additional tools for creating documents and interactive applications programmatically. These tools can be used to develop [Maple Learn](#) content or to create applications to be used in Maple. Maple Learn is an online environment designed specifically for teaching and learning mathematics.

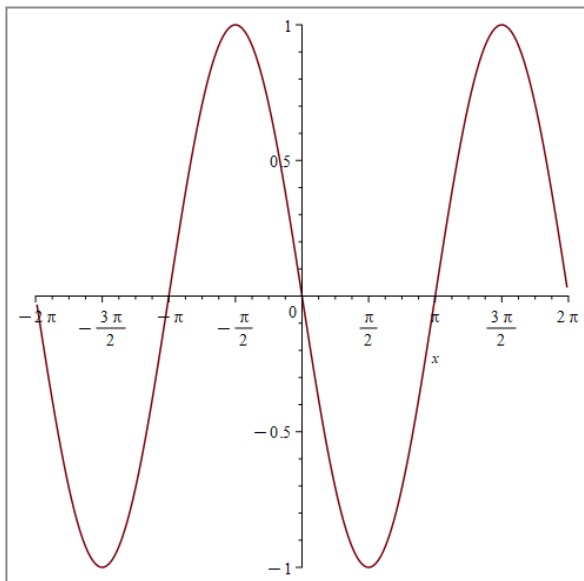
## New Layout Engine

The [ShowCanvas](#) command now uses a more sophisticated layout by default, rather than a pure grid. This allows, as in the following example, multiple smaller items, such as buttons to be placed next to larger components, like a plot.

```
1 Grading:-Quiz("Which is a plot of  $\${FUNC}$ ?", 1,  
2   proc (  
3     randomize();  
4     local A := [sin(x), cos(x), tan(x)][rand(1 .. 3)()];  
5     Grading:-Quiz:-Set(` $\${FUNC}$ ` = A);  
6     [plot(A), plot(-A), plot(Pi*A, x = -2*Pi .. 2*Pi)];  
7   end proc,  
8   gradeisindex = true,  
9   title = "Plot Multiple-Choice Randomized"  
10  style = multiplechoice,  
11  output = showcanvas  
12 );
```

Plot Multiple-Choice Randomized

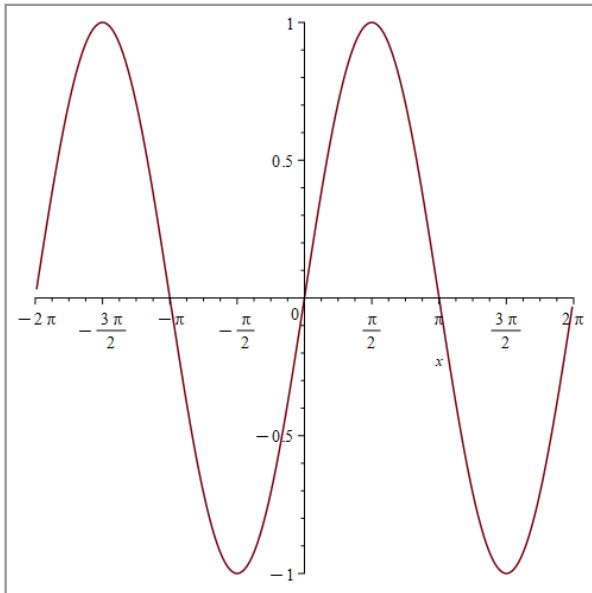
Which is a plot of  $\sin(x)$ ?



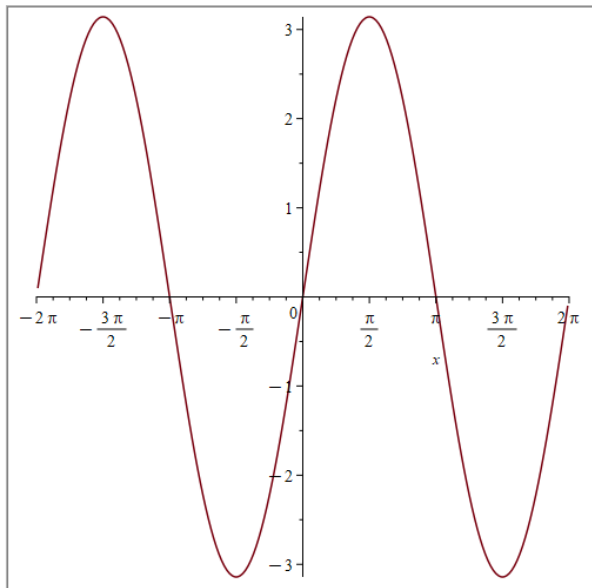
Check Answer

Try Another

□



□



## Practice Sheets

When you give your students a practice quiz involving money, percentages, etc. you may want appropriate symbols such as \$ and % to be used in the question and beside the response. In Maple 2024, the [PracticeSheet](#) command has new options, *suffix*, *qsuffix*, *prefix*, and *qprefix*, that allow decorations the generated question content and response areas.

```

1 with(Student:-Basics):
2 with(DocumentTools:-Canvas):
3 with(RandomTools[MersenneTwister]):
4 GenDec:= proc();
5     0.01*GenerateInteger(range=0..100)
6 end proc:
7
8 Compperc:= proc(response, question);
9     if response=question*100 then true else false end if;
10 end proc:
11
12 sheet := Student:-Basics:-PracticeSheet(GenDec,
13     compare = Compperc,
14     output = canvas,
15     suffix="%",
16     title = "Converting Decimals to Percentages Practice",
17     message =
18     "Convert the following decimals to percentages. Do not type the % symbol,"
19 );
20 ShowCanvas(sheet, entrybox=false);

```

## Converting Decimals to Percentages Practice

Convert the following decimals to percentages. Do not type the % symbol.

$0.92 = 92 \% \checkmark$

$0.44 = 44 \% \checkmark$

$0.95 = 95 \% \checkmark$

$0.05 = 50 \% \times$

$0.97 = 97 \% \checkmark$

$0.58 = 58 \% \checkmark$

Check My Work

New Sheet

> New Math Entry Box